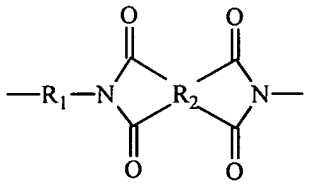
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented) A method for processing a feed, said method comprising:

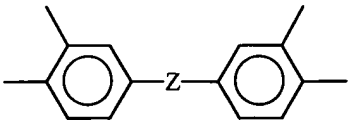
(a) providing a selectively permeable membrane wherein said membrane comprises a first side and a second side,

wherein said membrane further comprises at least one polymer or copolymer comprising a repeating unit of formula (I):



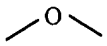
(I)

in which R_2 is a moiety having a composition formula (C),



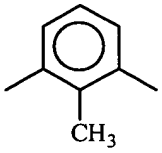
(C)

in which Z is a moiety having a composition formula (M),

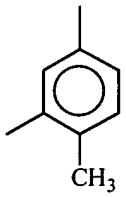


(M)

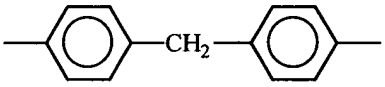
and in which R_1 is a moiety having a composition selected from the group consisting of formula (Q), formula (S), formula (T), and mixtures thereof,



(Q)



(S)



(T);

b) contacting said first side of said membrane with a gaseous feed mixture of at least two or more gas components;

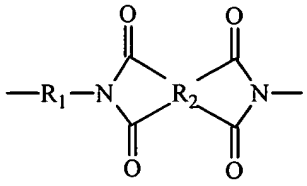
c) causing at least one component of said gaseous feed mixture to selectively permeate through the membrane, thereby forming on said second side of said membrane a permeate composition which has a concentration of at least one component that is greater than the concentration of said gaseous feed mixture;

d) removing from said second side of said membrane said permeate composition; and

e) withdrawing from said first side of said membrane a composition, which has a concentration of at least one component that is less than the concentration of said gaseous feed mixture.

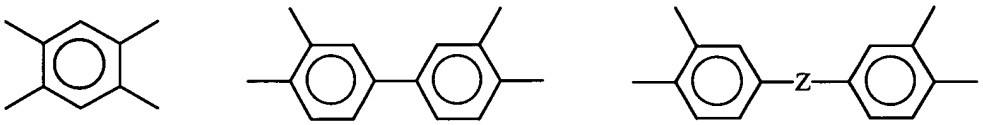
Claim 2 (currently amended) A method for processing a feed, said method comprising:

(a) providing a selectively permeable membrane wherein said membrane comprises a first side and a second side, wherein said membrane further comprises at least one polymer or copolymer comprising a repeating unit of formula (I):



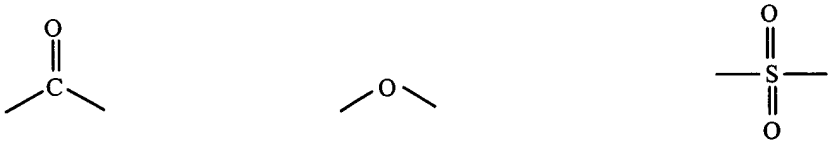
(I)

in which R_2 is a moiety having a composition selected from the group of consisting of formula (A), formula (B), formula (C), and mixtures thereof,



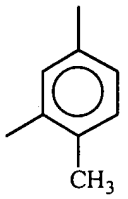
(A) (B) (C)

in which Z is a moiety having a composition selected from the group consisting of formula (L), formula (M), formula (N) and mixtures thereof,



(L) (M) (N)

wherein R_1 is a moiety formula (S):



(S)

(b) contacting said first side of said membrane with ~~said~~ a gaseous feed mixture of at least two or more gas components;

(c) causing at least one component of said gaseous feed mixture to selectively permeate through said membrane, thereby forming on said second side of said membrane a permeate composition with a concentration of said at least one component ~~or components~~ that is greater than a concentration of said at least one component ~~or components~~ in said gaseous feed mixture;

(d) removing from said second side of said membrane said permeate composition; and

(e) withdrawing from said first side of said membrane a composition which has a concentration of said at least one component ~~or components~~ that is less than a concentration of said at least one component ~~or components~~ in said gaseous feed mixture.

Claim 3 (previously presented) The method of claim 1, wherein said gaseous feed mixture further comprises at least hydrogen and methane.

Claim 4 (previously presented) The method of claim 1, wherein said gaseous feed mixture further comprises at least carbon dioxide and methane.

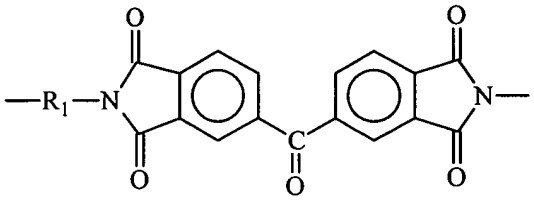
Claim 5 (previously presented) The method of claim 1, wherein said gaseous feed mixture further comprises at least nitrogen and methane.

Claim 6 (currently amended) The method of claim 1, further comprising the steps of repeating steps (a)-(e) continuously or nearly continuously for at least about 200 hours of operation, wherein after about 200 hours of operation, said membrane exhibits a permeance for said at least one ~~gas~~ component that is at least about 70 % of the permeance of said at least one ~~gas~~ component at an initial time of use.

Claim 7 (original) The method of claim 1, wherein said membrane comprises a composite hollow fiber membrane comprising a supporting core layer and a gas-separating sheath layer.

Claim 8 (previously presented) The method of claim 1, wherein said gaseous feed mixture further comprises at least one olefin and at least one paraffin, and wherein at least one olefin is separated from said mixture.

Claim 9 (previously presented) The method of claim 2, wherein said repeating unit of formula (I) comprises repeating units of formula (Ia):



(Ia)

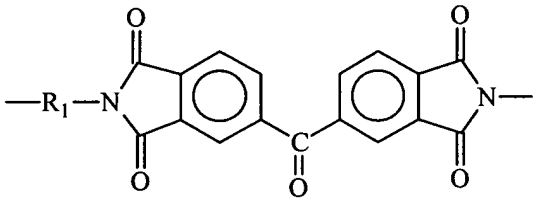
wherein R_1 is a moiety as defined above.

Claim 10 (canceled)

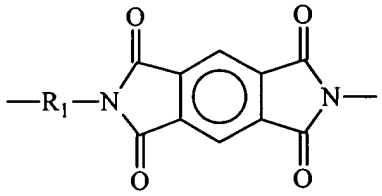
Claim 11 (canceled)

Claim 12 (currently amended) A method for processing a feed, said method comprising:

(a) providing a selectively permeable membrane wherein said membrane comprises a first side and a second side, and wherein said membrane further comprises at least one polymer or copolymer comprising a plurality of repeating units having a composition of formula (Ia) and a composition of formula (Ib):

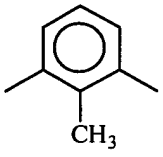


(Ia)

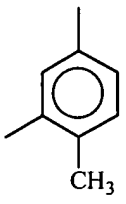


(Ib)

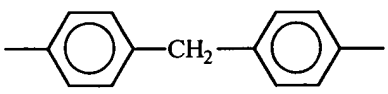
wherein R_1 is a moiety having a composition selected from the group consisting of formula (Q), formula (S), formula (T):



(Q)



(S)



(T)

and mixtures thereof,

wherein units of formula (Ib) comprise about 1 – 99% of the total of said repeating units of formulas (Ia) and (Ib);

(b) contacting said first side of said membrane with ~~said~~ a gaseous feed mixture of at least two or more gas components;

(c) causing at least one component of said feed mixture to selectively permeate through said membrane, thereby forming on said second side of said membrane a permeate composition which has a concentration of said at least one component ~~or components~~ that is greater than a concentration of said at least one component ~~or components~~ in said feed mixture;

(d) removing from said second side of said membrane said permeate composition; and

(e) withdrawing from said first side of said membrane a composition which has a concentration of said at least one component ~~or components~~ that is less than a concentration of said at least one component ~~or components~~ in said gaseous feed mixture.

Claim 13 (previously presented) The method of claim 12, wherein R_1 is comprised of formula (Q) in about 1-99% of said repeating units, and wherein R_1 is comprised of formula (S) in a complementary amount so as to total 100%.

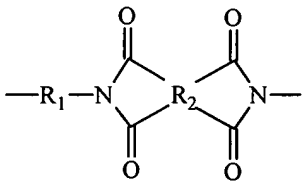
Claim 14 (currently amended) The method of claim 12, in which R_1 has a composition of formula (Q) in about 20% of said repeating units, wherein R_1 has a composition of formula (S) in about 80% of said repeating units, and wherein said repeating units of formula (Ib) comprise about 40% of the total of said repeating units of formulas (Ia) and (Ib) ~~in formula (I)~~.

Claim 15 (previously presented) The method of claim 1, wherein said gaseous feed mixture comprises at least one C_{5+} hydrocarbon component, and wherein said at least one C_{5+} hydrocarbon component condenses in liquid form on said first

side of said membrane and wherein said first side comprises the feed side of said membrane.

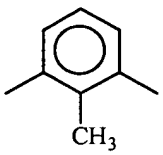
Claim 16 (currently amended) A method for processing a feed, said method comprising:

(a) providing a gas separation membrane having a first side and a second side, said membrane comprising a blend of at least one polymer of a Type 1 copolyimide and at least one polymer of a Type 2 copolyimide in which the Type 1 copolyimide comprises a repeating unit of formula (I):

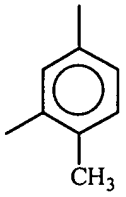


(I)

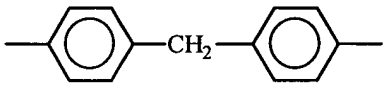
in which R_1 is a moiety having a composition selected from the group consisting of formula (Q), formula (S), formula (T), and mixtures thereof,



(Q)

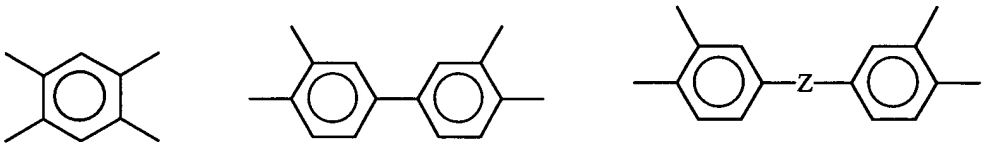


(S)



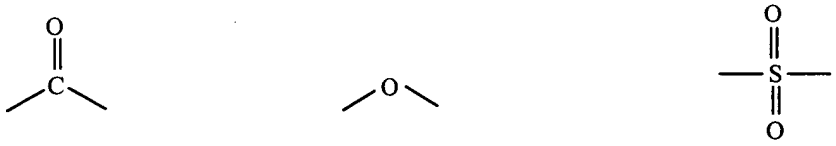
(T)

and R_2 is a moiety having a composition selected from the group of consisting of formula (A), formula (B), formula (C), and mixtures thereof,



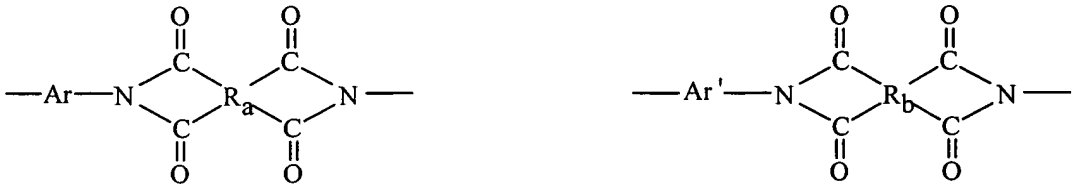
(A) (B) (C)

in which Z is a moiety having a composition selected from the group consisting of formula (L), formula (M), formula (N) and mixtures thereof;



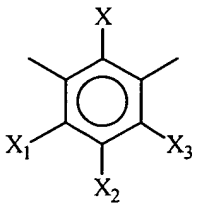
(L) (M) (N)

in which the Type 2 copolyimide comprises a Type 2 repeating unit of formulas (IIa) and (IIb)

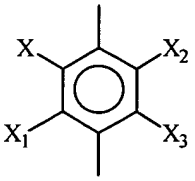


(~~Iia~~ IIa) (IIb)

in which Ar is a moiety having a composition selected from the group consisting of formula (U), formula (V):

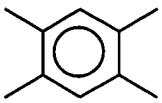


(U)

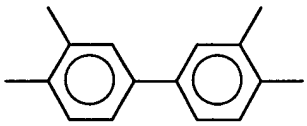


(V)

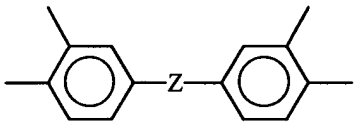
and mixtures thereof, in which X, X_1, X_2, X_3 are selected independently from the group consisting of hydrogen and alkyl groups having 1 to 6 carbon atoms, and in which at least two of X, X_1, X_2, X_3 in each of the formula (U) and the formula (V) are an alkyl group,in which Ar' is an aromatic diamine moiety, and
in which R_a and R_b are each selected independently from the group consisting of formula (A), formula (B), formula (C), formula (D),



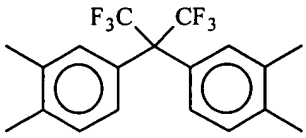
(A)



(B)



(C)



(D)

and mixtures thereof, wherein Z is as defined above;

(b) contacting said first side of said membrane with a feed mixture comprising at least one C_{5+} hydrocarbon component;

(c) causing at least one component of said feed mixture to selectively permeate through said membrane, thereby forming on said second side of said membrane a permeate composition which has a concentration of said at least one component ~~or components~~ greater than a concentration of said at least one component ~~or components~~ in said feed mixture;

(d) removing from said second side of said membrane said permeate composition; and

(e) withdrawing from said first side of said membrane a composition which has a concentration of said at least one component ~~or components~~ that is less than a concentration of said at least one component ~~or components~~ in said feed mixture.

Claim 17 (canceled)

Claim 18 (canceled)

Claim 19 (previously presented) The method of claim 16, wherein a ratio of Type 1 polymer to Type 2 polymer in the blend is at least about 1.0.

Claim 20 (previously presented) The method of claim 16, wherein said feed mixture comprises at least hydrogen and methane.

Claim 21 (previously presented) The method of claim 16, wherein said feed mixture comprises at least carbon dioxide and methane.

Claim 22 (previously presented) The method of claim 16, wherein said feed mixture comprises at least nitrogen and methane.

Claim 23 (previously presented) The method of claim 16, wherein said feed mixture is selected from the group consisting of carbon dioxide; carbon monoxide; sulfide gases; hydrogen sulfide; paraffins; iso-paraffins; olefins; ozone; argon; chlorine; hydrogen; methane; nitrogen; carbon monoxide; propylene; propane; hexane; and mixtures thereof.

Claim 24 (currently amended) The method of claim 16, further comprising the step of repeating steps (a)-(e) continuously or nearly continuously for at least about 200 hours of operation, wherein after about 200 hours of operation, the membrane exhibits a permeance for said at least one component ~~or components~~ that is at least about 70% of the permeance of said at least one component ~~or components~~ at an initial time of usage.

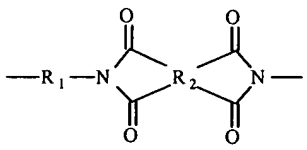
Claim 25 (previously presented) The method of claim 16, wherein said membrane comprises a composite hollow fiber membrane comprised of a supporting core layer and a gas-separating sheath layer.

Claim 26 (previously presented) The method of claim 16, wherein at least one of said at least one C_{5+} hydrocarbon components condenses in liquid form on said first side of the membrane and wherein said feed mixture is fed to said first side of said membrane.

Claim 27 (currently amended) A method for processing a feed, said method comprising:

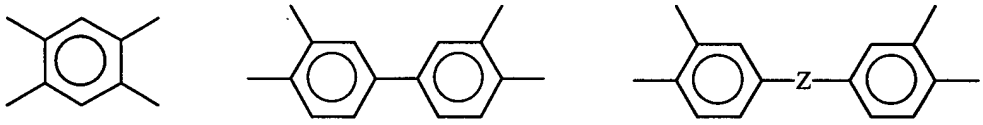
(a) providing a composite selectively permeable membrane comprising a corelayer with at least a first side and a second side and a gas-

separating sheath layer wherein said core layer comprises a polymer or copolymer comprising a repeating unit of formula (I):



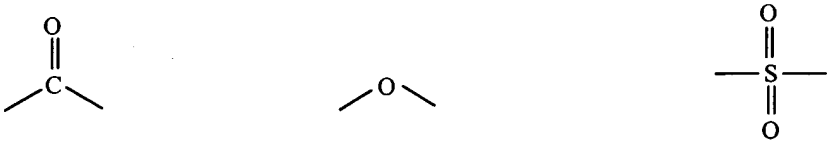
(I)

in which R_2 is a moiety having a composition selected from the group of consisting of formula (A), formula (B), formula (C) and mixtures thereof,



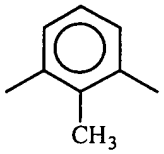
(A) (B) (C)

in which Z is a moiety having a composition selected from the group consisting of formula (L), formula (M), formula (N) and mixtures thereof; and

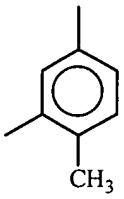


(L) (M) (N)

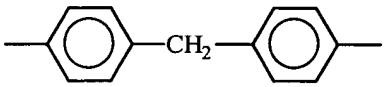
R_1 is a moiety having a composition selected from the group consisting of formula (Q), formula (S), formula (T), and mixtures thereof:



(Q)



(S)



(T)

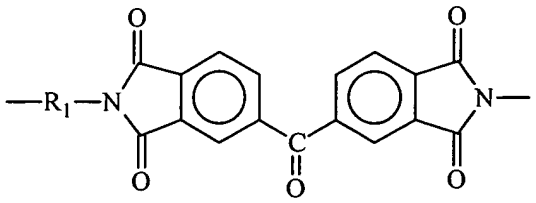
(b) contacting at least said first side of said membrane with a gaseous feed mixture of at least two or more gas components, wherein said gaseous feed mixture comprises at least one C_{5+} hydrocarbon component;

(c) causing at least one component of said gaseous feed mixture to selectively permeate through said membrane, thereby forming on said second side of the membrane a permeate composition which has a concentration of said at least one component that is greater than the concentration of said gaseous feed mixture;

(d) removing from said second side of said membrane said permeate composition; and

(e) withdrawing from said first side of said membrane a composition which has a concentration of said at least one component that is less than the concentration of said at least one component ~~or components~~ in said gaseous feed mixture.

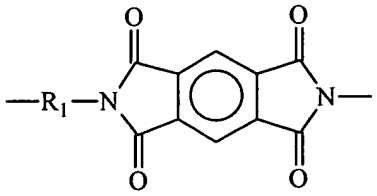
Claim 28 (previously presented) The method of claim 27, in which said repeating unit of formula (I) comprises repeating units of formula (Ia):



(Ia)

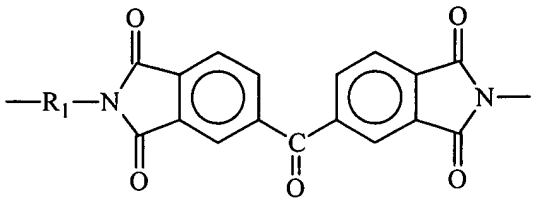
Claim 29 (previously presented) The method of claim 28, in which R_1 is comprised of formula (Q) in about 16% of said repeating units, formula (S) in about 64% of said repeating units, and formula (T) in about 20% of said repeating units.

Claim 30 (previously presented) The method of claim 27, in which said repeating unit of formula (I) comprises repeating units of formula (Ib):

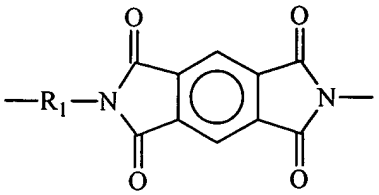


(Ib)

Claim 31 (previously presented) The method of claim 27, in which said repeating units of formula (I) comprise a plurality of repeating units having a composition of formula (Ia) and a composition of formula (Ib):



(Ia)



(Ib)

wherein units of formula (Ib) comprise about 1 – 99% of the total of said repeating units of formulas (Ia) and (Ib), and in which R_1 is comprised of formula (Q) in about 1-99% of said repeating units, and wherein R_1 is comprised of formula (S) in a complementary amount so as to total 100%.

Claim 32 (previously presented) The method of claim 31, in which R_1 has a composition of formula (Q) in about 20% of said repeating units, and wherein R_1 has a composition of formula (S) in about 80% of said repeating units, and wherein repeating units of formula (Ib) comprise about 40% of the total of said repeating units of formulas (Ia) and (Ib) in formula (I).

Claim 33 (previously presented) The method of claim 27, wherein the driving force for separation comprises a pressure gradient across said membrane of about 0.69 MPa to about 13.8 MPa.

Claim 34 (currently amended) The method of claim 27, wherein said membrane provided is contained in a plurality of permeators ~~permeator, and wherein at least two said permeators are provided~~.

Claim 35 (previously presented) The method of claim 34, wherein said permeators are used to separate or concentrate said gaseous feed mixture and

wherein an average performance of said permeators is about 3 GPU to about 30 GPU carbon dioxide permeance.

Claim 36 (previously presented) The method of claim 34, wherein said permeators are used to separate or concentrate said gaseous feed mixture and wherein a carbon dioxide/nitrogen selectivity ratio is about 10 to about 25.